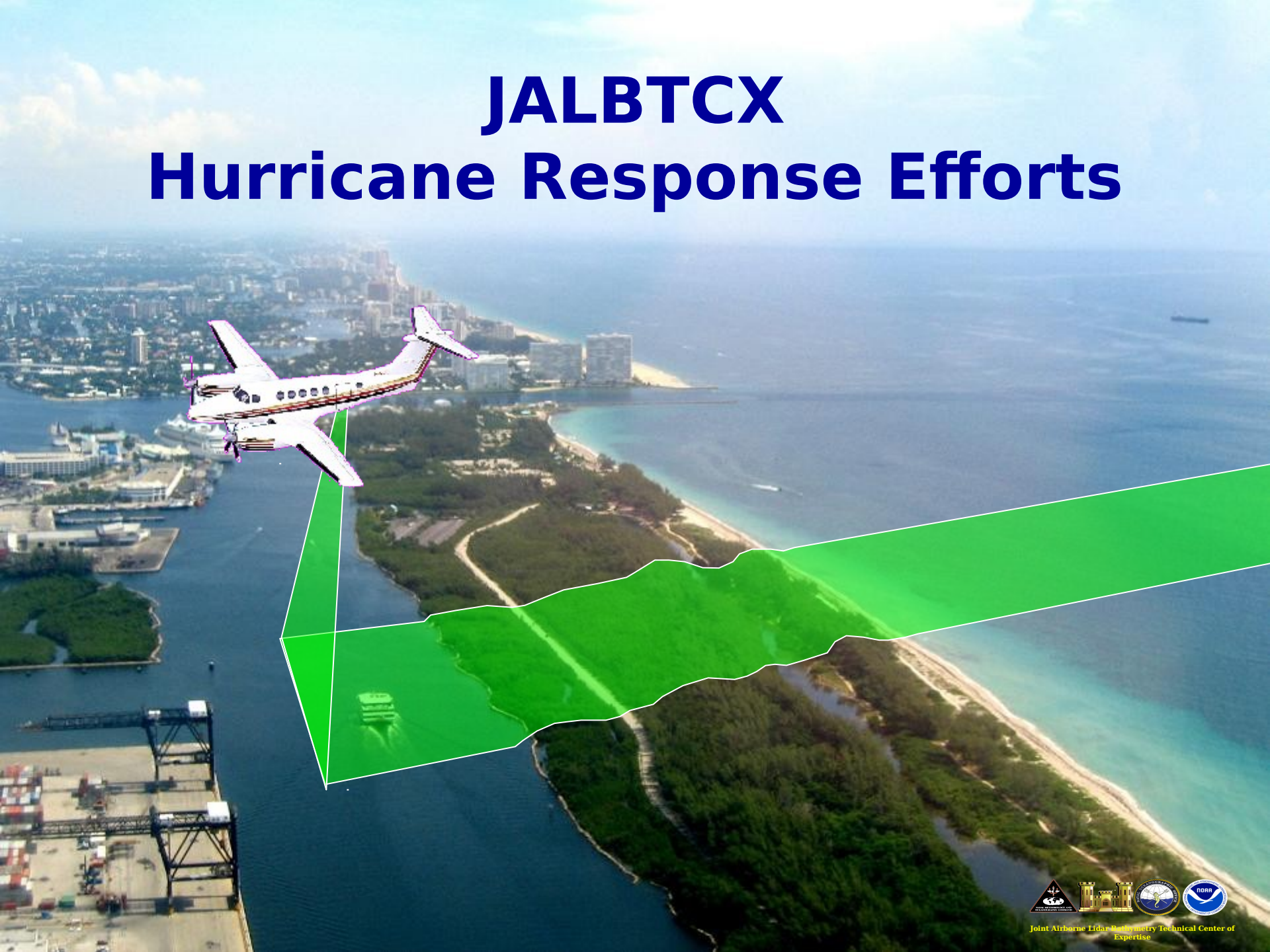
JALBTCX
Hurricane Response Efforts



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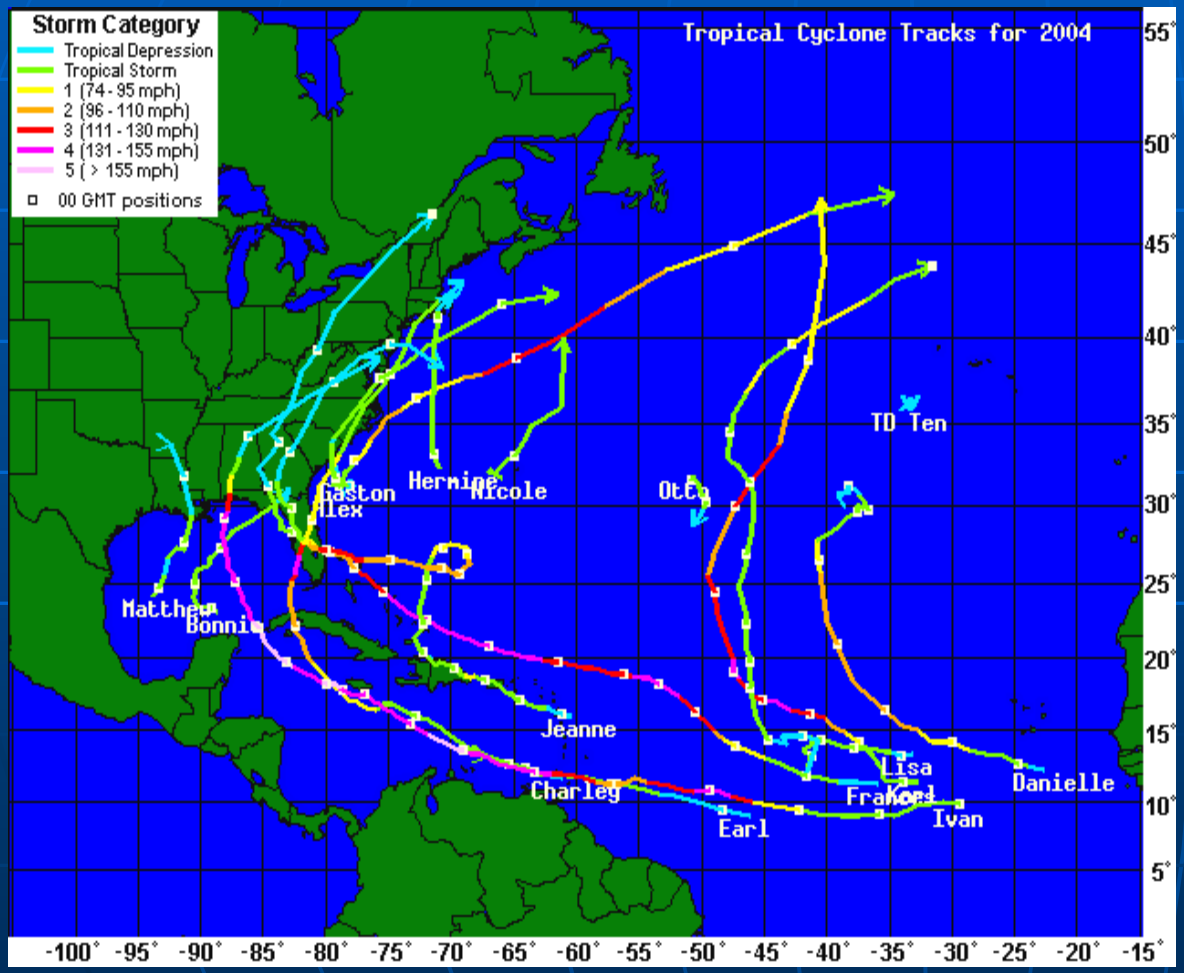
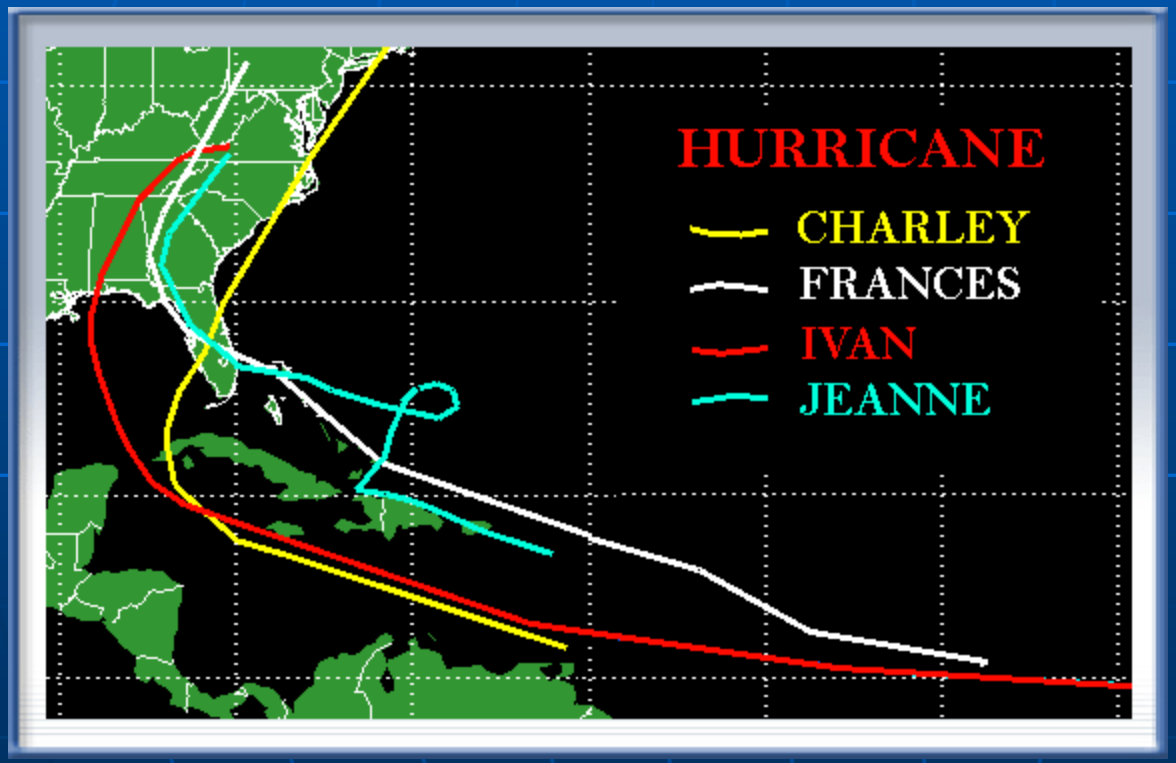
04 Storm Season



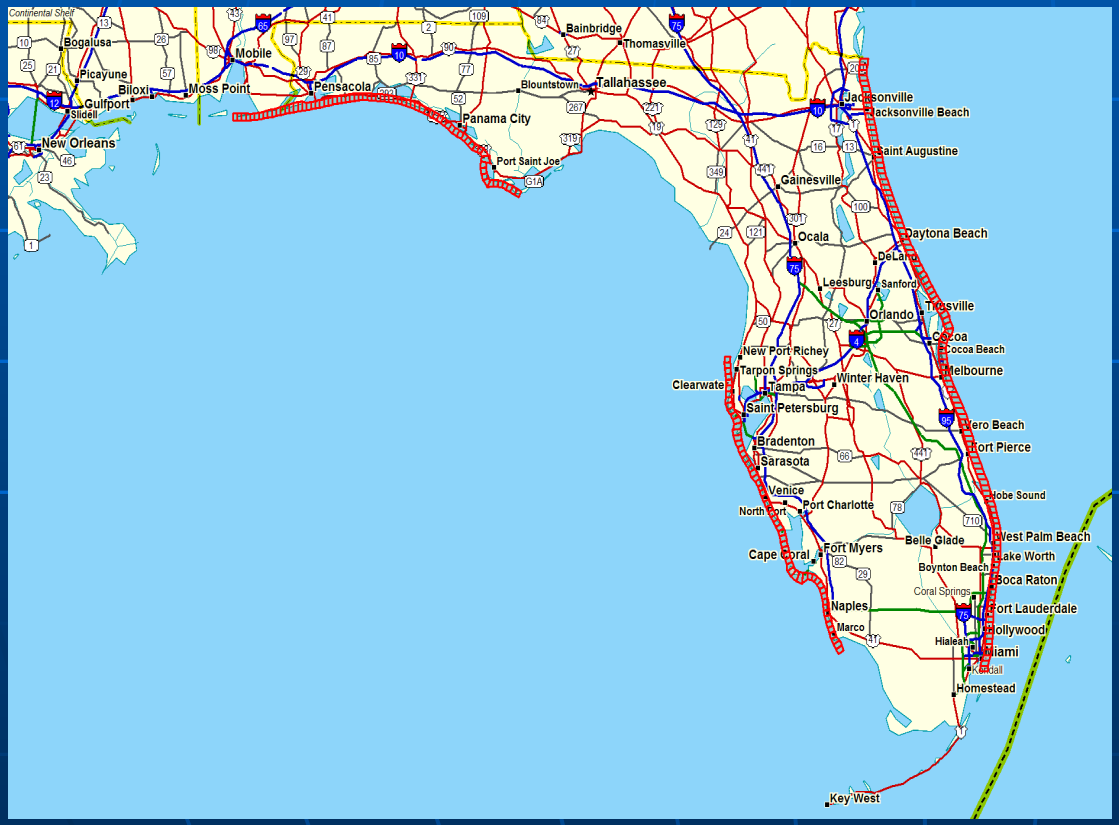
- **16 Named Storms**
- **9 Hurricanes**
- **4 Hurricanes Landfall in Florida**

04 Hurricanes SE US



- **Charley (Category 4)**
- **Frances (Category 4)**
- **Ivan (Category 4)**
- **Jeanne (Category 3)**

04 Post Storms Survey Limits



- **Nov – Dec 04**
- **~680 miles coastline**
- **~65 million Bathy Elev**
- **~800 million Topo Elev**
- **~220,000 Digital Images**

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Pensacola Beach

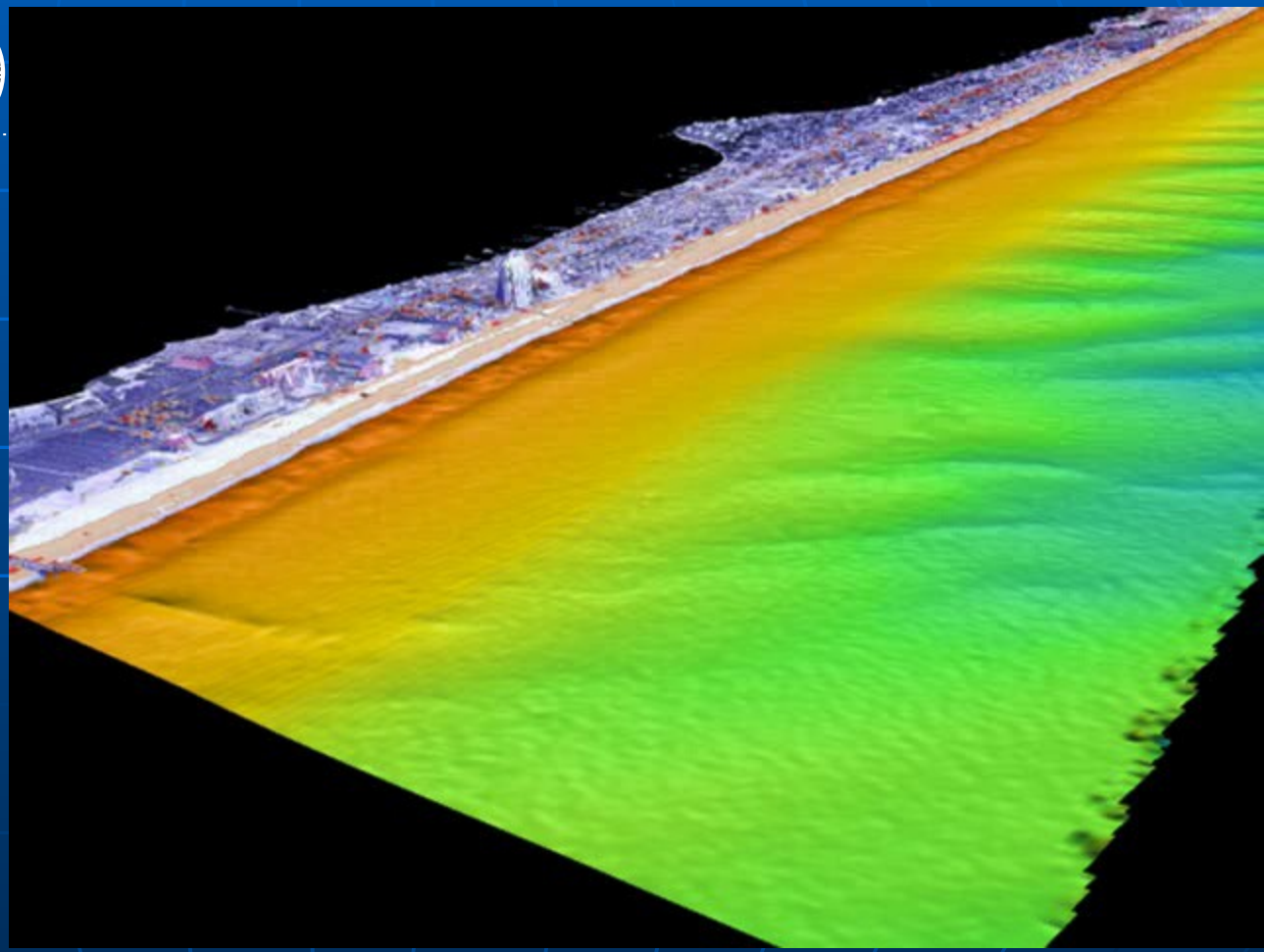
Joint Airborne Lidar Bathymetry
Technical Center of Expertise

CHARTS
COMPACT HYDROGRAPHIC AIRBORNE RAPID TOTAL SURVEY

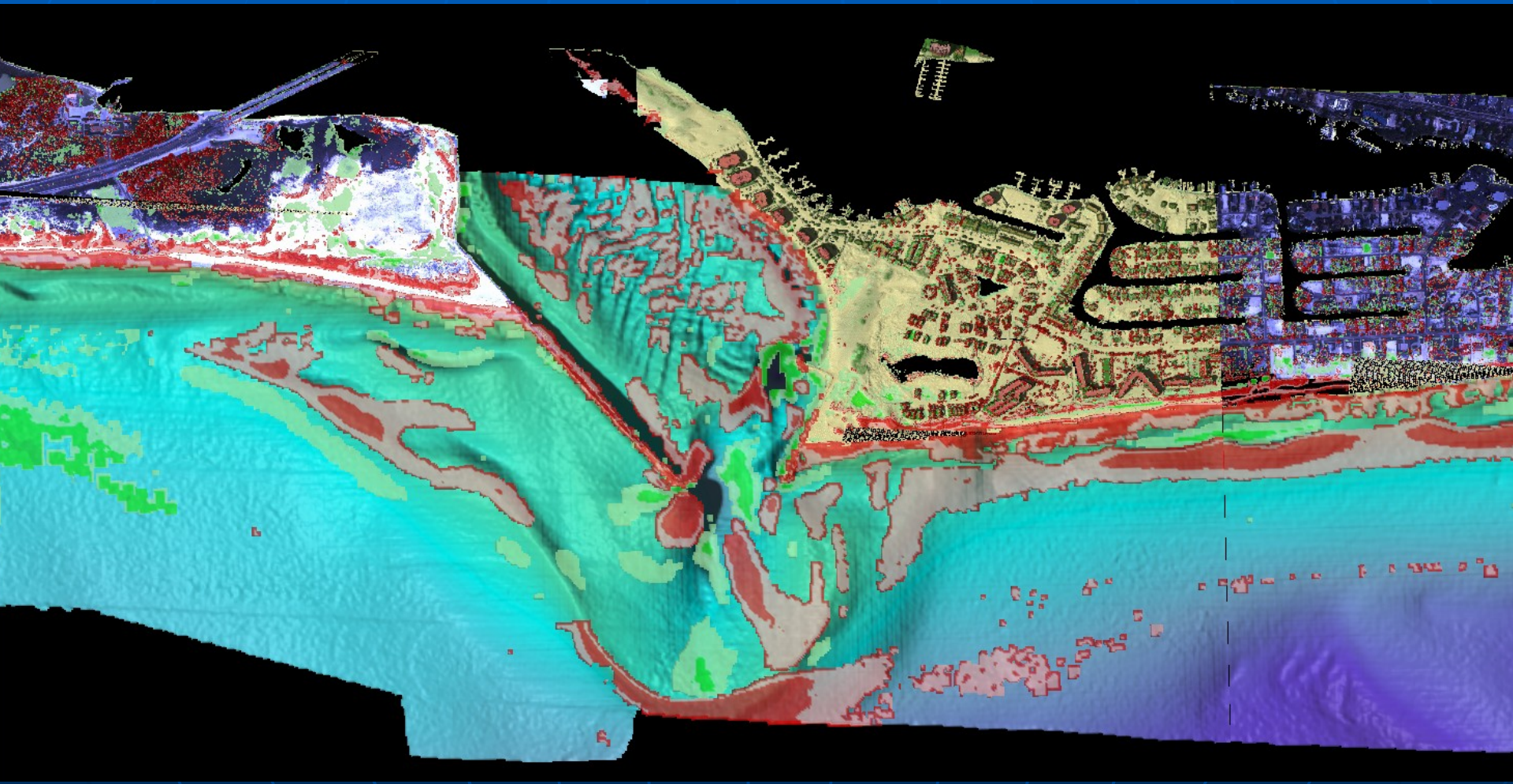
USGS science for a changing world

NASA

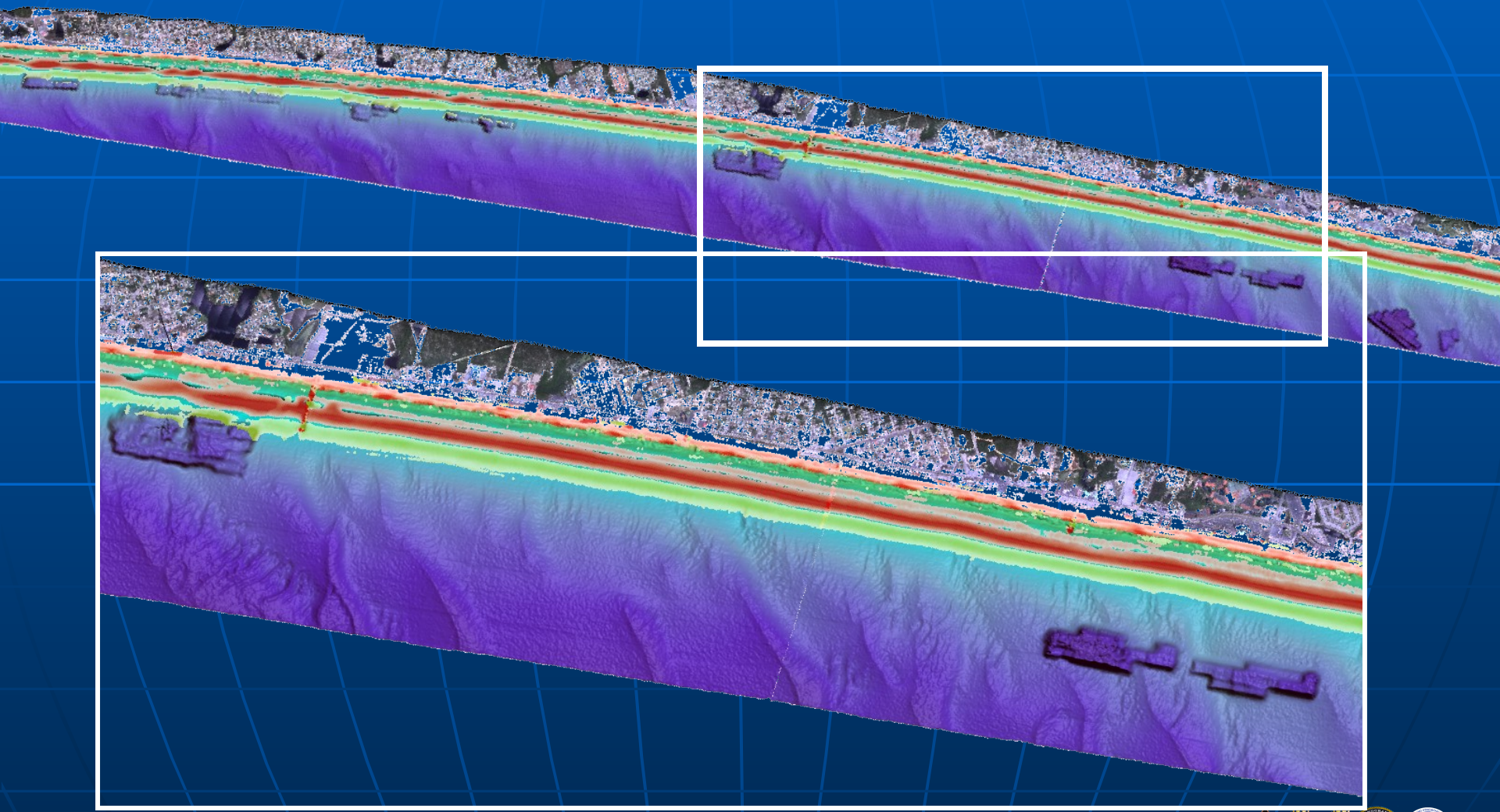
EAARL
Experimental Advanced Airborne Research Lidar



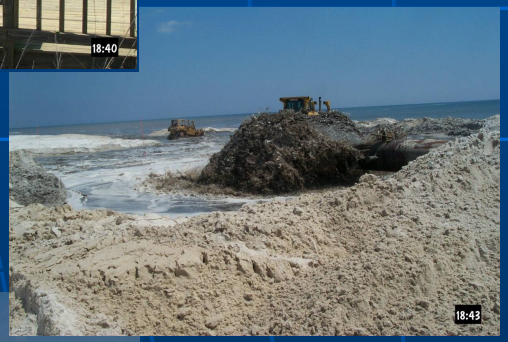
East Pass, Florida Panhandle



Panama City storm damage protection project, Florida Panhandle



Post Hurricane Reconstruction



16 federal projects
$200,000,000 reconstruction

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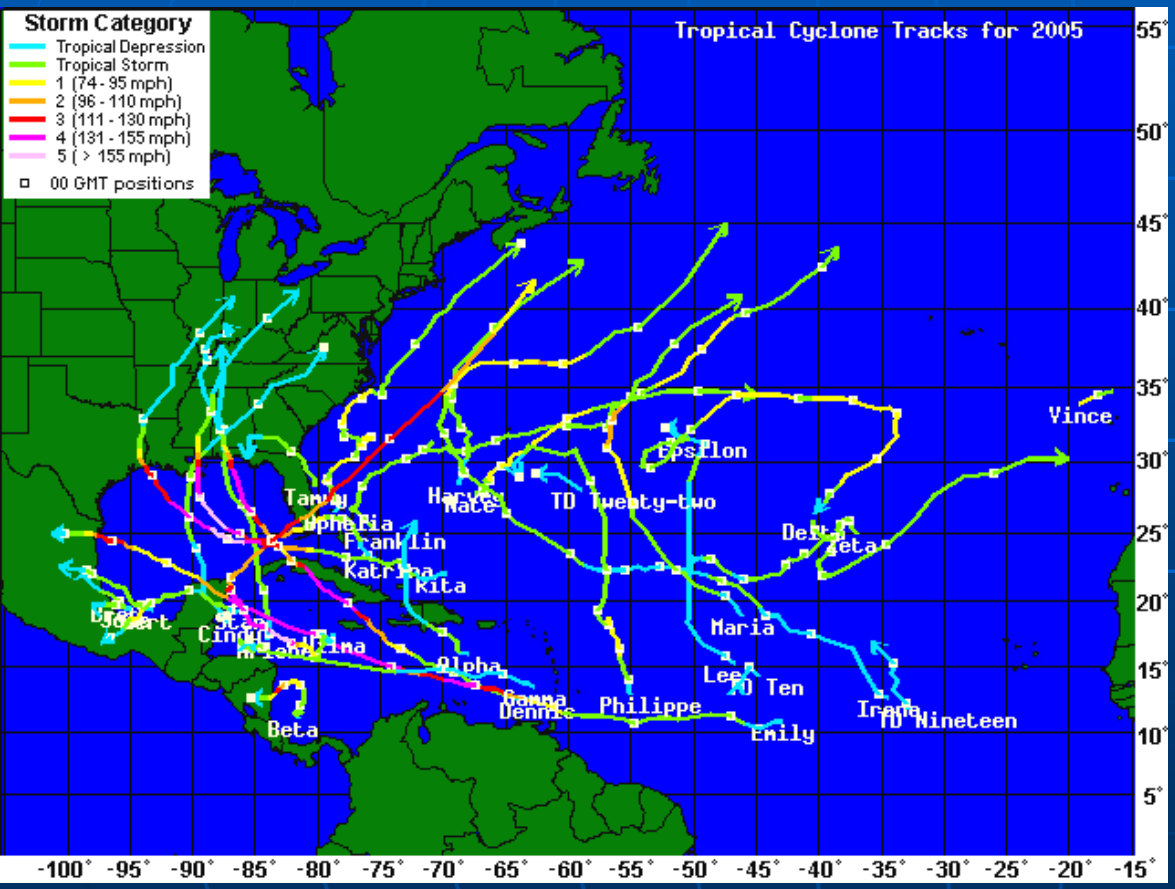
05 Storm Season



- **27 Named Storms**
- **15 Hurricanes**

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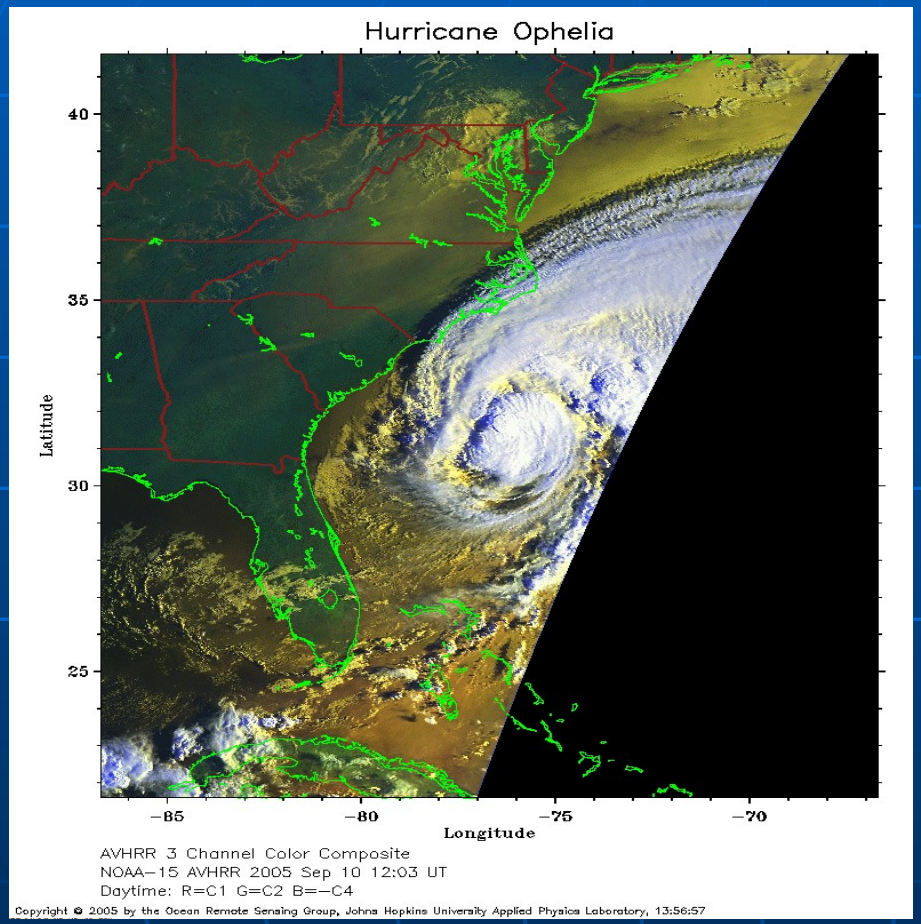
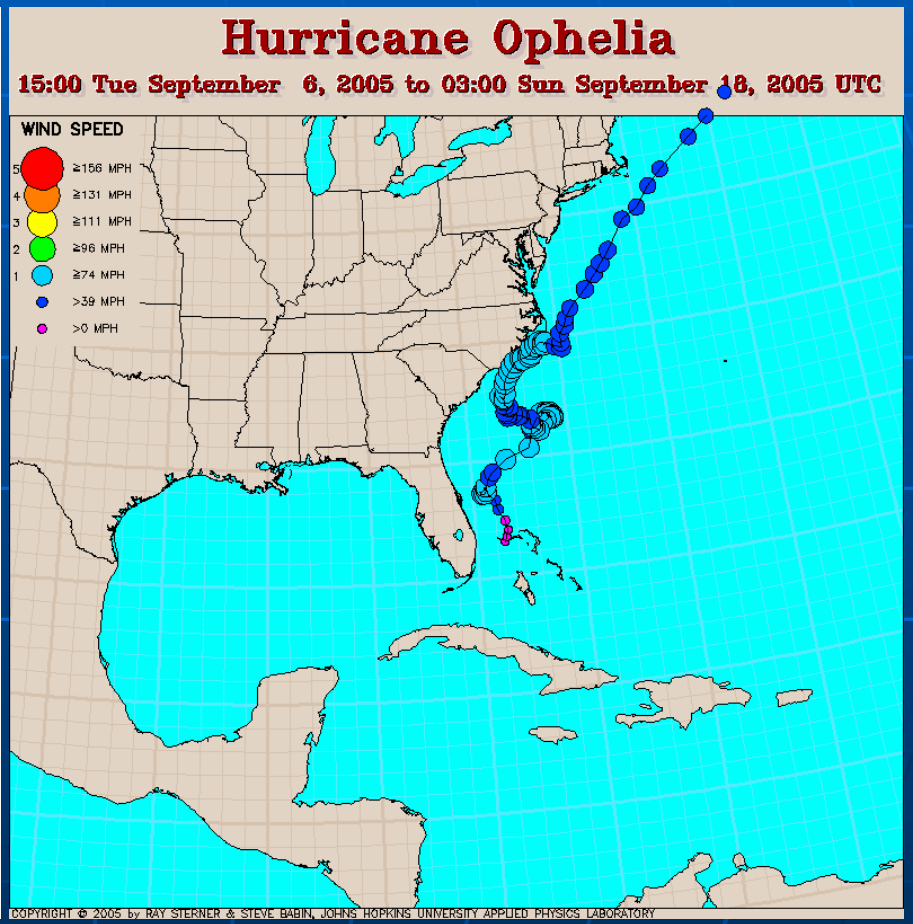
05 Hurricane Ophelia




Hurricane Ophelia
15:00 Tue September 6, 2005 to 03:00 Sun September 18, 2005 UTC
WIND SPEED
5 ≥156 MPH
4 ≥131 MPH
3 ≥111 MPH
2 ≥96 MPH
1 ≥74 MPH
>39 MPH
>0 MPH
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RCM 05 Revised Limits

- **Miami – Portland**
- **~1800 miles**
- **Bathy / Topo / RGB Imagery**

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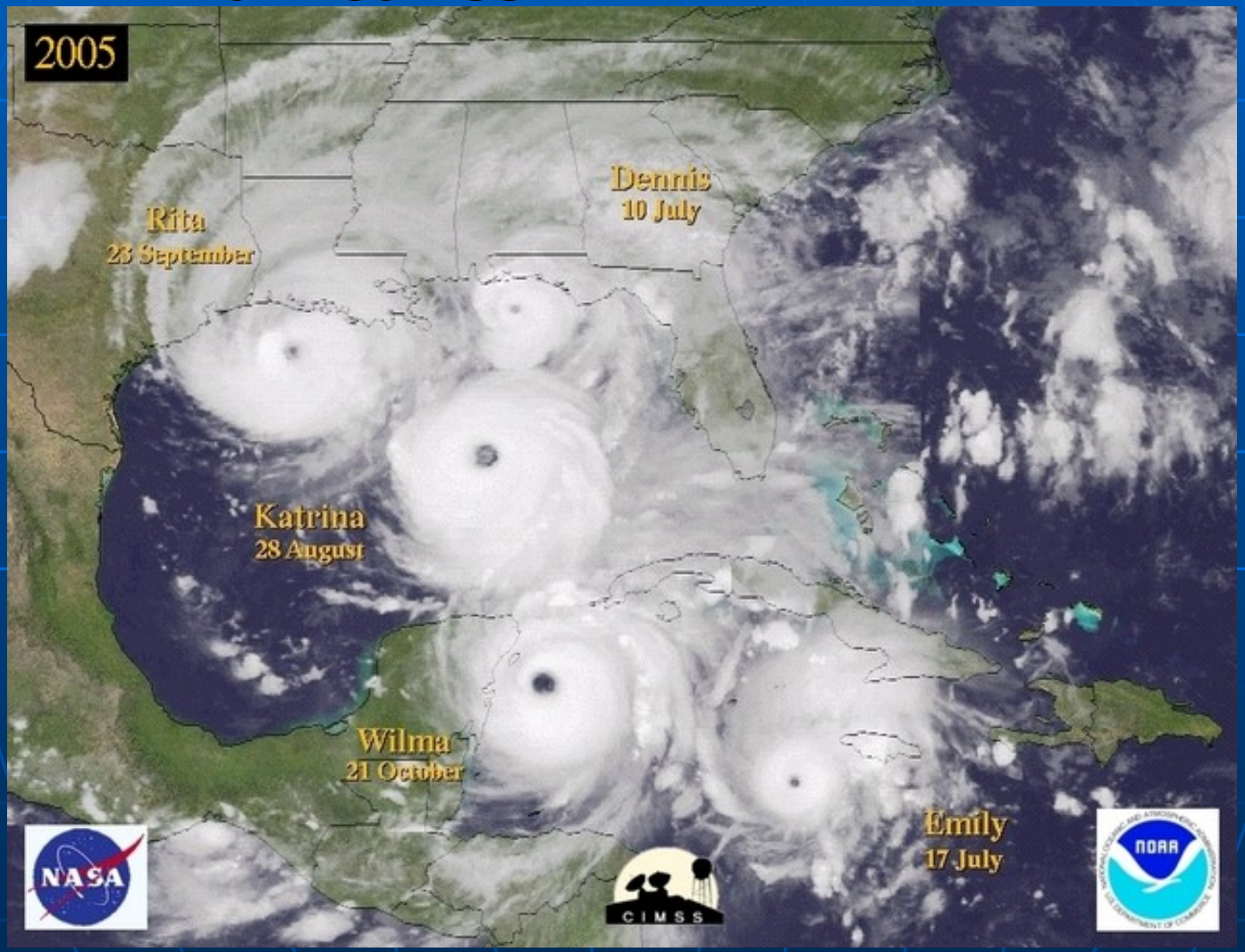
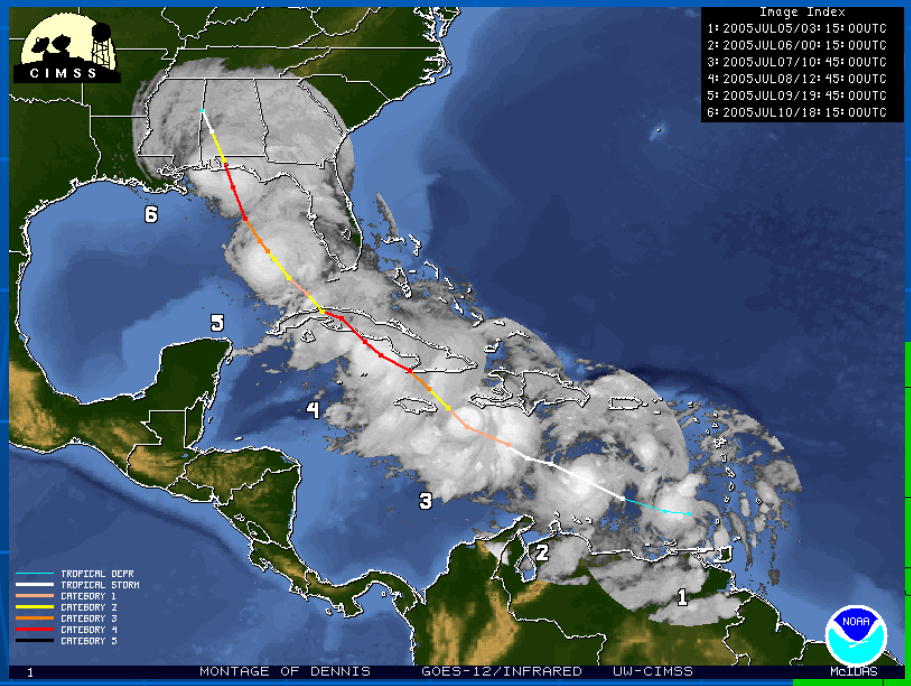
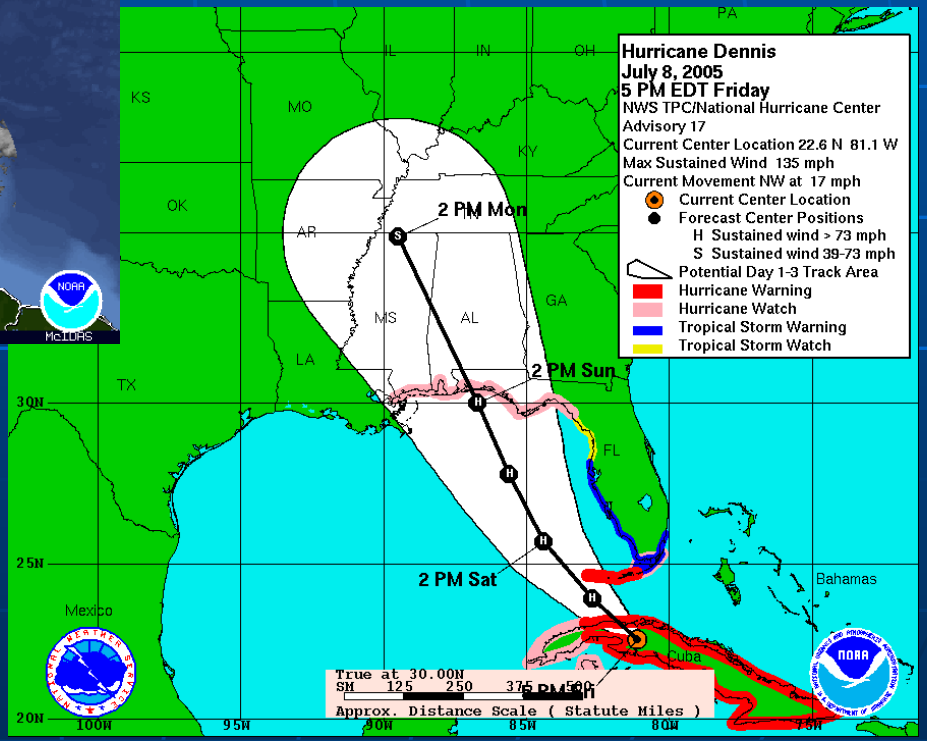
05 Gulf of Mexico Hurricanes

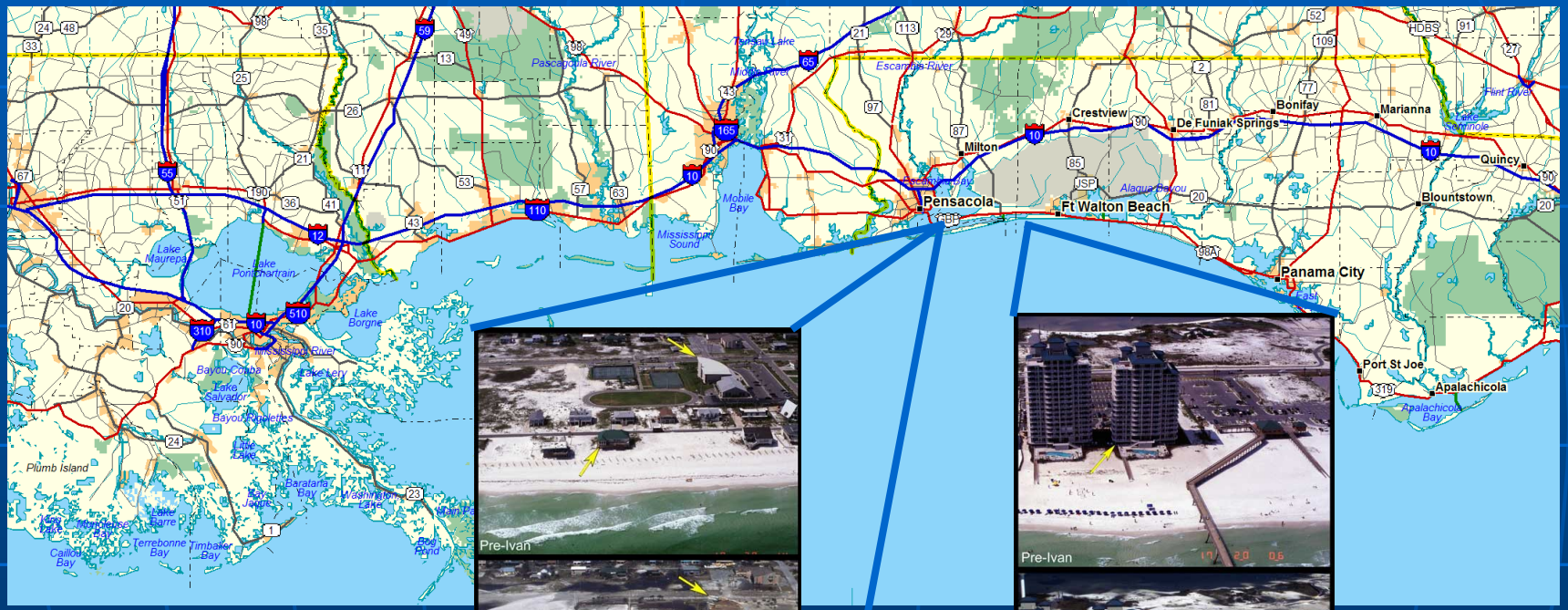


05 Hurricane Dennis





Hurricane Dennis Damage



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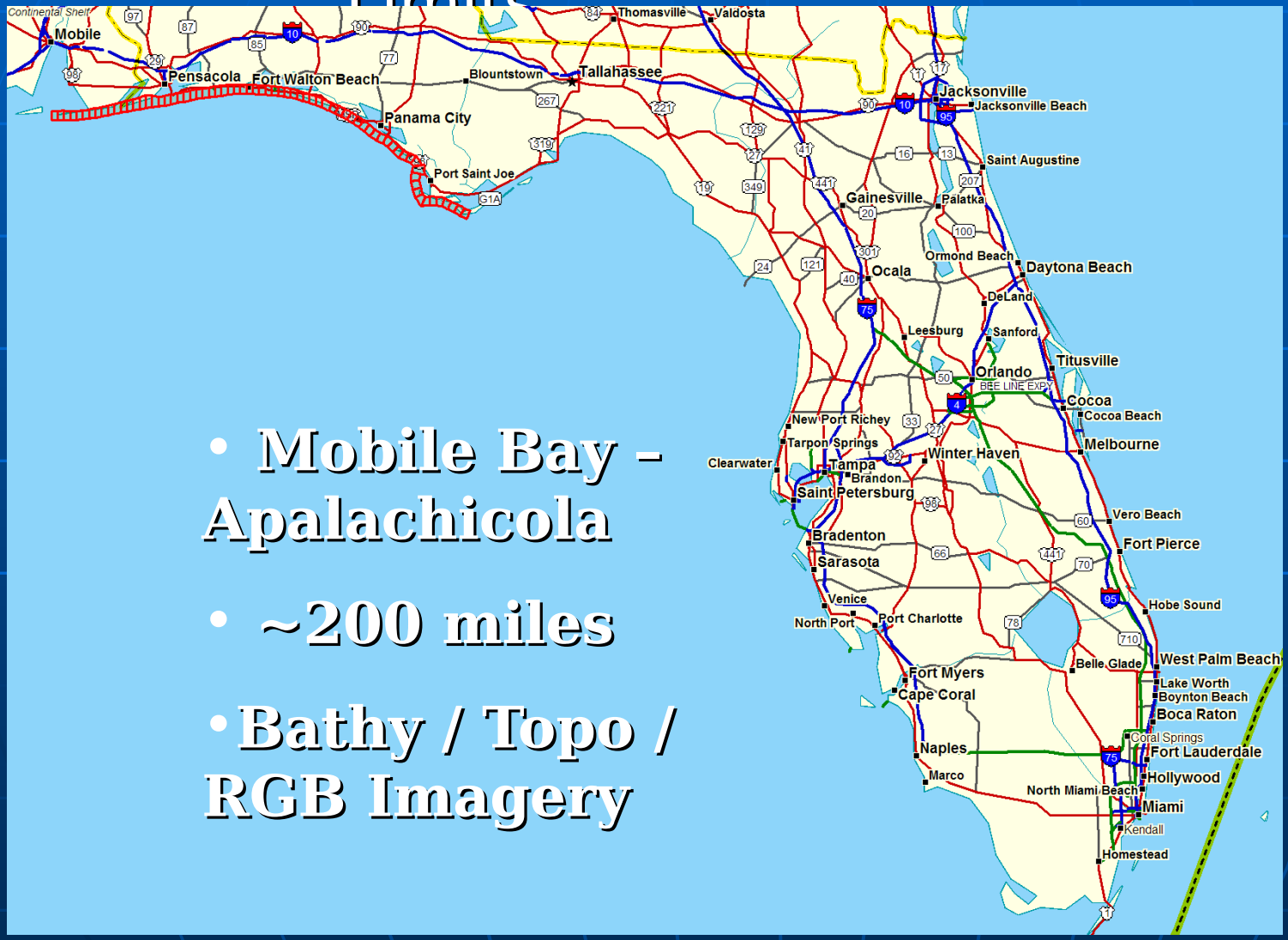
05 Post Dennis Survey Limits



- **Mobile Bay – Apalachicola**
- **~200 miles**
- **Bathy / Topo / RGB Imagery**

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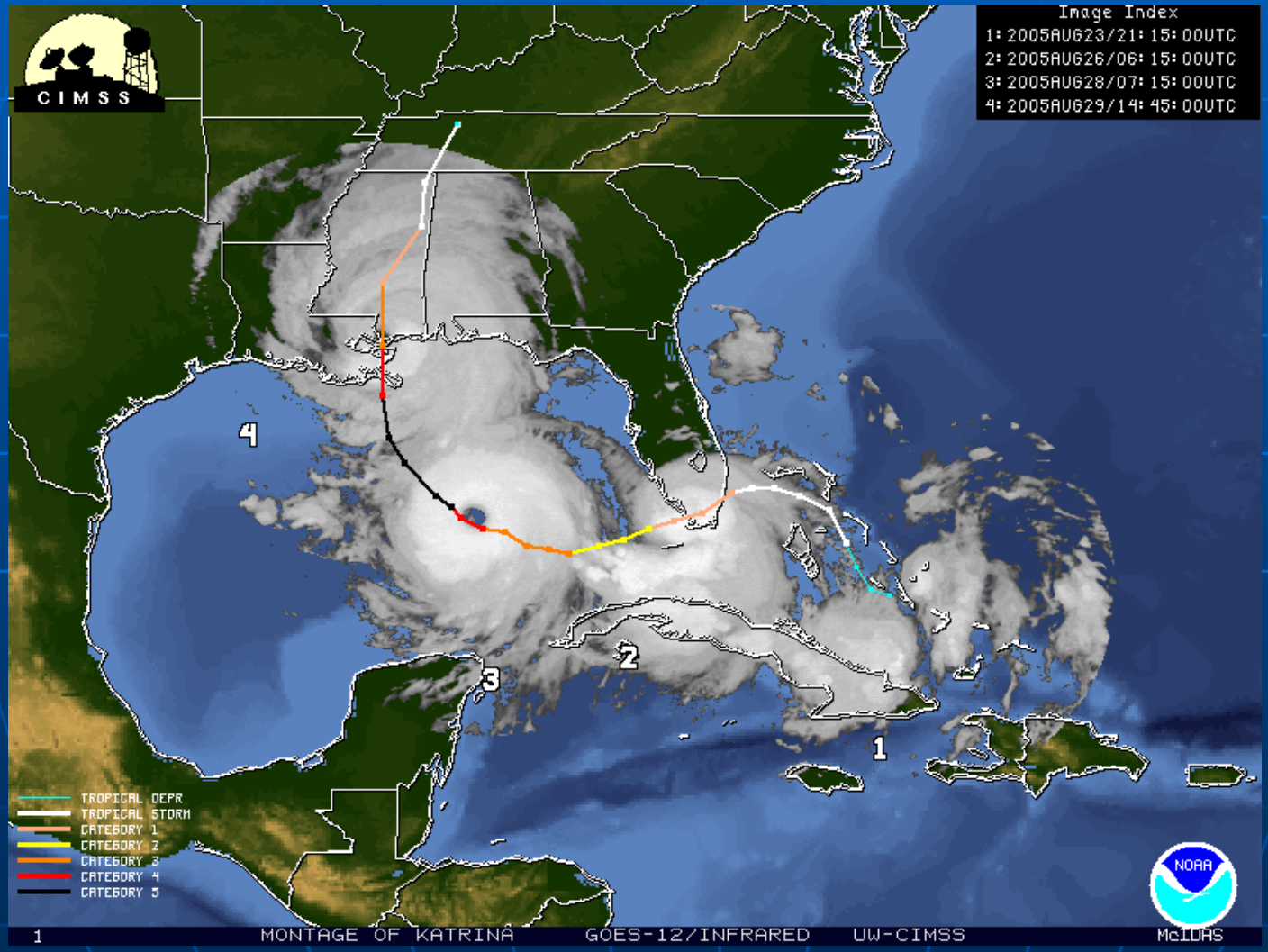
05 Hurricane Katrina



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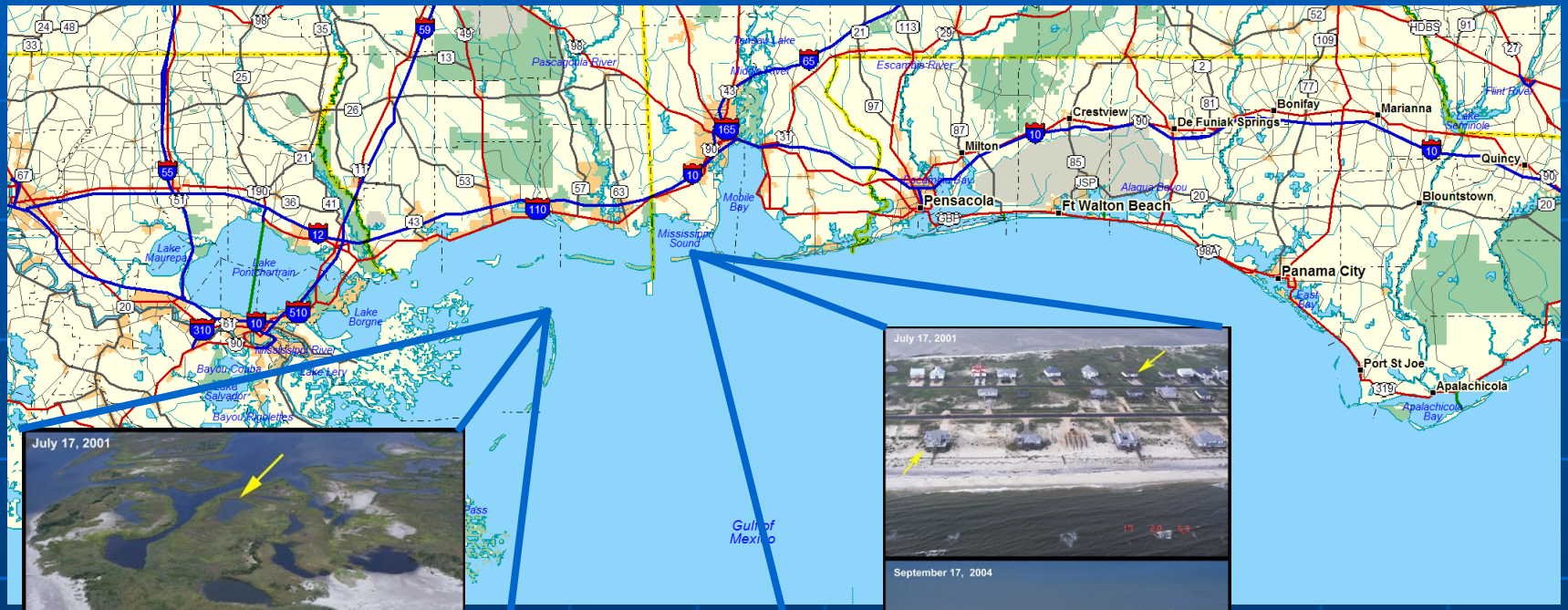
Hurricane Katrina Damage



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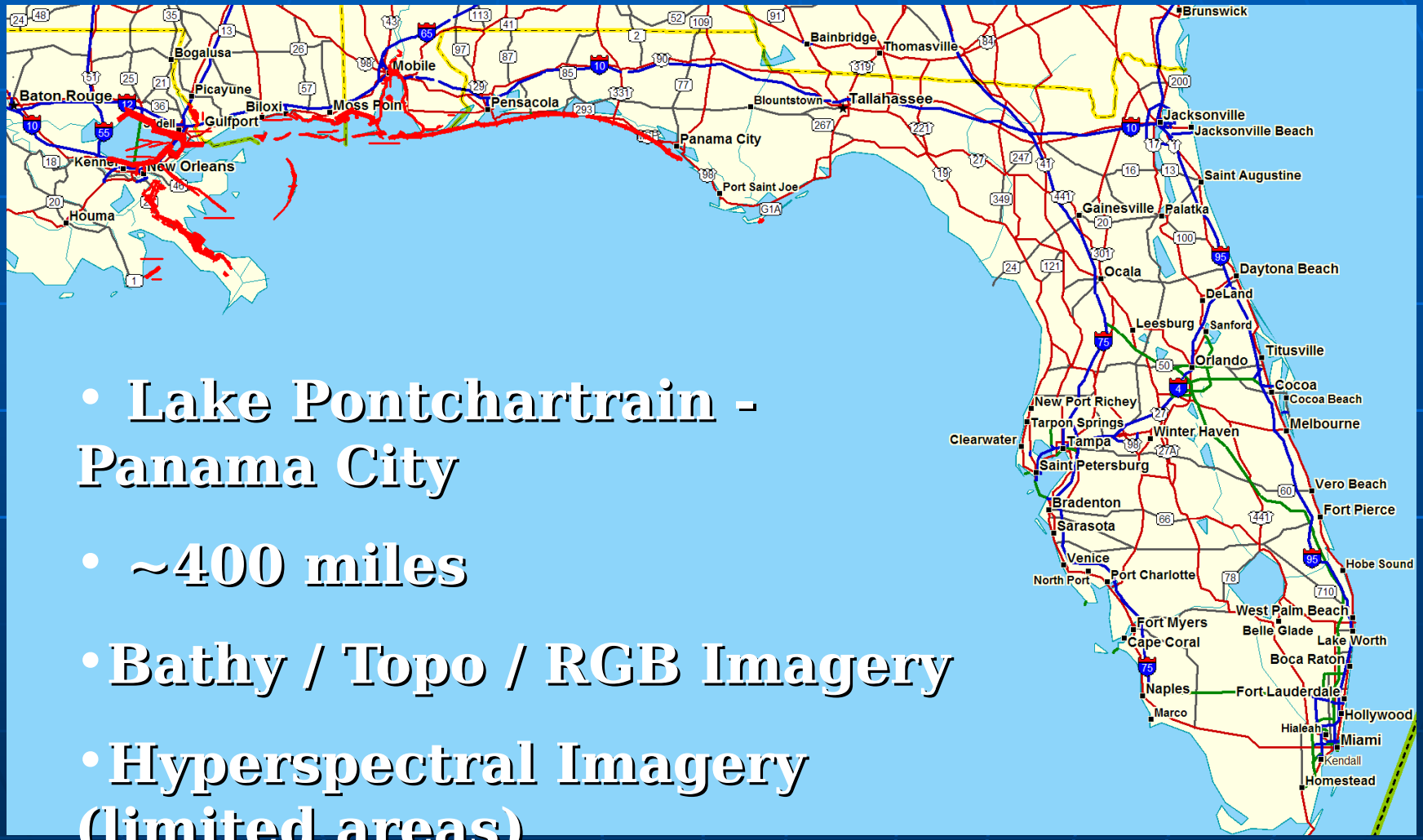
05 Post Katrina Survey Limits



- **Lake Pontchartrain - Panama City**
- **~400 miles**
- **Bathy / Topo / RGB Imagery**
- **Hyperspectral Imagery (limited areas)**

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Acknowledgements

- **Jennifer Wozencraft**
- **James Heslin**
- **Eddie Wiggins**
- **Norma Clark**
- **USGS**
- **NOAA**
- **University of Wisconsin Web Page**

Questions?